NOTICE

All drawings located at the end of the document.

Rocky Flats Environmental Technology Site

TYPE 1
RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR)

BUILDING 130 WAREHOUSE CLOSURE PROJECT

REVISION 0

April 1, 2004

CLASSIFICATION REVIEW NOT REQUIRED PER
EXEMPTION NUMBER CEX-005-02

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BUILDING 130 WAREHOUSE CLOSURE PROJECT

REVISION 0

April 1, 2004

Reviewed by: _____ Date 4-1-04
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ABBREVIATIONS/ACRONYMS

ACM	Asbestos containing material
Be	Beryllium
CDPHE	Colorado Department of Public Health and the Environment
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act
$DCGL_{EMC}$	Derived Concentration Guideline Level – elevated measurement comparison
$DCGL_W$	Derived Concentration Guideline Level – Wilcoxon Rank Sum Test
D&D	Decontamination and Decommissioning
DDCP	Decontamination and Decommissioning Characterization Protocol
DOE	U S Department of Energy
DPP	Decommissioning Program Plan
DQA	Data quality assessment
DQOs	Data quality objectives
EPA	U S Environmental Protection Agency
FDPM	Facility Disposition Program Manual
HVAC	Heating, ventilation, air conditioning
HSAR	Historical Site Assessment Report
IHSS	Individual Hazardous Substance Site
IWCP	Integrated Work Control Package
K-H	Kaiser-Hill
LBP	Lead-based paint
LLW	Low-level waste
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
NORM	Naturally occurring radioactive material
NRA	Non-Rad-Added Verification
OSHA	Occupational Safety and Health Administration
PARCC	Precision, accuracy, representativeness, comparability and completeness
PCBs	Polychlorinated Biphenyls
PDS	Pre-demolition survey
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RFFO	Rocky Flats Field Office
RLC	Reconnaissance Level Characterization
RLCR	Reconnaissance Level Characterization Report
RSP	Radiological Safety Practices
SVOCs	Semi-volatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TSA	Total surface activity
VOCs	Volatile organic compounds

EXECUTIVE SUMMARY

A Reconnaissance Level Characterization (RLC) was performed to enable facility "Typing" per the DPP (10/8/98) and compliant disposition and waste management for the Building 130 Warehouse Because this facility was an anticipated Type 1 facility, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP) requirements All facility surfaces were characterized in this RLC, including the interior and exterior surfaces (i e , equipment, floors, walls, ceilings and roof) The cafeteria and administration portions of Building 130 have already undergone an RLC and were classified as a Type 1 facility – refer to the Building 130 Administration & Cafeteria, Building 131 and T303E RLCR, Revision 0, dated April 21, 2003 Environmental media beneath and surrounding the facility was not within the scope of this RLCR and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA

The RLC encompassed both radiological and chemical characterization to enable compliant disposition and waste management pursuant to the D&D Characterization Protocol (MAN-077-DDCP) The characterization built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report

Results indicate that no radiological contamination exists in excess of the PDSP unrestricted release limits of DOE Order 5400 5 There was no asbestos containing materials identified in the Building 130 Warehouse All beryllium sample results were less than 0 1 $\mu g/100cm^2$ Leaking PCB ballasts (and those greater than 9 pounds), and hazardous waste items (e g , mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury-containing gauges, circuit boards, leaded glass, and lead-acid batteries) will be removed prior to demolition and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations Demolition debris will be managed in compliance with regulations governing PCBs (40 CFR 761), and Environmental Compliance Guidance #27, *Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal,* as applicable

Based upon this RLCR, the Building 130 Warehouse is considered a Type 1 facility and can be demolished To ensure this facility remains free of contamination and RLC data remain valid, Level 2 isolation controls have been established and the facility posted accordingly

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1 INTRODUCTION

A Reconnaissance Level Characterization (RLC) was performed to enable compliant disposition and waste management of the Building 130 Warehouse Because this facility was an anticipated Type 1 facility, a PDS characterization was performed All facility surfaces were characterized in this RLC, including the interior and exterior surfaces of the facility (i e , equipment, floors, walls, ceilings and roof) Environmental media beneath and surrounding the facility was not within the scope of this RLC Report (RLCR) and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed, among these is the Building 130 Warehouse The location of this facility is shown in Attachment A, *Facility Location Map* This facility no longer supports the RFETS mission and requires removal in order to reduce Site infrastructure, risks and/or operating costs

Before this facility can be removed, a Pre-Demolition Survey (PDS) must be conducted, this document presents the PDS results The RLC was conducted pursuant to the Decontamination and Decommissioning Characterization Protocol (MAN-077-DDCP) and the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP) The RLC built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report (HSAR)

1.1 Purpose

The purpose of this report is to communicate and document the results of the RLC effort An RLC is performed before Type 1 building demolition to define the pre-demolition radiological and chemical conditions of the facility Pre-demolition conditions are compared with the unrestricted release limits for radiological and non-radiological contaminants RLC results will enable project personnel to make final disposition decisions, develop related worker health and safety controls, and estimate waste volumes by waste types

1.2 Scope

This report presents the pre-demolition radiological and chemical conditions of the Building 130 Warehouse The cafeteria and administration portions of Building 130 have already undergone an RLC and were classified as a Type 1 facility – refer to the Building 130 Administration & Cafeteria, Building 131 and T303E RLCR, Revision 0, dated April 21, 2003 Environmental media beneath and surrounding the facility are not within the scope of this RLCR and will be addressed using the Soil Disturbance Permit process and in compliance with RFCA

1.3 Data Quality Objectives

The Data Quality Objectives (DQOs) used in designing this RLC were the same DQOs identified in the Pre-Demolition survey Plan for D&D Facilities (MAN-127-PDSP) Refer to section 2 0 of MAN-127-PDSP for these DQOs

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2 HISTORICAL SITE ASSESSMENT

A Facility-specific Historical Site Assessment (HSA) was conducted to understand the facility histories and related hazards The assessment consisted of facility walk downs, interviews, and document review, including review of the Historical Release Report Results were used to identify data gaps and needs, and to develop radiological and chemical characterization plans Results of the facility-specific HSA were documented in a facility-specific *Historical Site Assessment Report (HSAR) for the Area 5 - Group 5 facilities,* dated September 2002, Revision 0 (refer to Attachment B, *Historical Site Assessment Report*) In summary, the HSAR identified minimal potential for radiological or chemical hazards, however, the HSAR did identify two RMAs (Radioactive Material Areas) and a Chemical Dispensary located in the 130 Warehouse

3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

The Building 130 Warehouse was characterized for radiological hazards per the PDSP Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces Measurements were performed to evaluate the contaminants of concern Based upon a review of historical and process knowledge, building walk-downs, and MARSSIM guidance, a Radiological Characterization Plan was developed during the planning phase that describe the minimum survey requirements (refer to the RISS Characterization Project files)

One radiological survey package was developed for the interior of the Building 130 Warehouse 130W03 The survey package was developed in accordance with Radiological Safety Practices (RSP) 16 01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure* Total surface activity (TSA), removable surface activity (RSA), media samples, and scan measurements were collected in accordance with RSP 16 02 *Radiological Surveys of Surfaces and Structures* Radiological survey data were verified, validated and evaluated in accordance with RSP 16 04, *Radiological Survey/Sample Data Analysis* Quality control measures were implemented relative to the survey process in accordance with RSP 16 05, *Radiological Survey/Sample Quality Control* Radiological survey data, statistical analysis results, and survey locations are presented in Attachment C, *Radiological Data Summary and Survey Maps* The radiological survey unit package is maintained in the RISS Characterization Project files

Eighty one (81) TSA measurements (38 random, 10 biased, 30 equipment and 3 QC) and seventy eight (78) RSA measurements (38 random, 10 biased and 30 equipment) were performed, and a minimum 5% of the facility interior surfaces were scanned, and 100% of the prior radioactive material storage areas were scanned The RLC data confirmed that the facility does not contain radiological contamination above the surface contamination guidelines provided in the PDSP Radiological survey data, statistical analysis results, and survey locations are presented in Attachment C, *Radiological Data Summary and Survey Maps* The radiological survey unit packages are maintained in the RISS Characterization Project files Level 2 Isolation Control postings are displayed on the building to ensure no radioactive materials are inadvertently introduced

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The exterior radiological surveys for the Building 130 Warehouse were performed as part of the RISS West Side Exterior PDS strategy effort (authorized by Department of Energy letter, *02-DOE-01598*, dated December 13th, 2002 and approved by CDPHE letter, *RE Proposed Deviations From The Pre-Demolition Survey Plan (PDSP)*, dated January 27, 2003, refer to the RISS Characterization Project Files for letter copies) The RISS West Side exterior building radiological surveys and locations can be found in survey unit package EXT-B-001, *RISS West Side Building Exteriors* Four (4) biased TSA measurements, four (4) biased RSA measurements, and a one (1) square meter scan at each of the four TSA/RSA locations were performed at biased locations on the exterior surfaces The RLC data collected in exterior survey unit package EXT-B-001 confirmed that the exterior surfaces of the Building 130 Warehouse do not contain radiological contamination above the surface contamination guidelines provided in the PDSP Radiological survey data, statistical analysis results, and survey map locations for the West-Side Exterior survey unit package EXT-B-001 are maintained in the RISS Characterization Project files

4 CHEMICAL CHARACTERIZATION AND HAZARDS

The Building 130 Warehouse was characterized for chemical hazards per the PDSP Chemical characterization was performed to determine the nature and extent of chemical contamination that may be present on, or in this facility Based upon a review of historical and process knowledge, visual inspections, and PDSP DQOs, additional sampling needs were determined A Chemical Characterization Plan (refer to RISS Characterization Project files) was developed during the planning phase that describes sampling requirements, the justification for the sample locations and estimated sample numbers Contaminants of concern included asbestos, beryllium, RCRA/CERCLA constituents, lead and PCBs Refer to Attachment D, *Chemical Data Summaries and Sample Maps*, for details on sample results and sample locations

4.1 Asbestos

A survey of building materials suspected of containing asbestos was conducted in the aforementioned building in accordance with the RLCP and the PDSP A CDPHE-certified asbestos inspector conducted the inspection and sampling in accordance with the *Asbestos Characterization Protocol, PRO-563-ACPR, Revision 1* Building materials suspected of containing asbestos were identified for sampling at the discretion of the inspector

A comprehensive, invasive asbestos inspection was conducted to determine the presence of friable and non-friable asbestos containing building materials Based on the inspection and sampling results, there was no asbestos containing materials identified in the Building 130 Warehouse Asbestos laboratory analysis data and sample location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps*

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4.2 Beryllium (Be)

Based on the HSAR and personnel interviews, the Building 130 Warehouse was an anticipated Type 1 facility However, there was not adequate historical and process knowledge to conclude that beryllium was not used or stored in this building Therefore, biased beryllium sampling was performed in accordance with the PDSP and the *Beryllium Characterization Procedure, PRO-536-BCPR, Revision 0, September 9, 1999* Biased sample locations corresponded with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition

All beryllium smear sample results were less than 0 1 µg/100cm^2 Beryllium laboratory sample data and location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps*

4.3 RCRA/CERCLA Constituents [including metals and volatile organic compounds (VOCs)]

Based on a review of the HSAR and facility walk-downs, the Building 130 Warehouse does not have a history of RCRA/CERCLA constituents, therefore, sampling was not performed as part of the RLC process

Sampling for lead in paint in Building 130 Warehouse was not performed Environmental Waste Compliance Guidance #27, *Lead-based Paint (LBP) and Lead-based paint Debris Disposal*, states that LBP debris generated outside of currently identified high contamination areas shall be managed as non-hazardous (solid) wastes, and additional analysis for characteristics of hazardous waste derived from LBP is not a requirement for disposal There were no high contamination areas in Building 130

The Building 130 Warehouse may contain RCRA regulated materials such as mercury switches and fluorescent lamps A thorough inspection of the facilities will be made, and all hazardous waste items (e g , mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury-containing gauges, circuit boards, leaded glass, and lead-acid batteries) will be removed prior to demolition and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations

4.4 Polychlorinated Biphenyls (PCBs)

Based on a review of the HSAR and a facility walk-down, no PCBs were used in the Building 130 Warehouse Based on the age of the buildings (constructed after 1980), paint is not expected to contain PCBs Because the Building 130 Warehouse may contain fluorescent light ballasts containing PCBs, fluorescent light fixtures will be inspected to identify PCB ballasts during removal operations PCB ballasts will be identified based on factors such as labeling (e g , PCB-containing and non PCB-containing), manufacturer, and date of manufacturing Leaking PCB ballasts (and those greater than 9 pounds) will be removed prior to demolition and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations

5 PHYSICAL HAZARDS

Physical hazards associated with the Building 130 Warehouse are those common to standard industrial environments and include hazards associated with energized systems, utilities, and trips and falls The building has been well maintained and is in good physical condition, and therefore, does not present hazards associated with building deterioration However, care should be taken during demolition activities as the Building 130 Warehouse and Storage Yard is located near PAC 100-613 "Asphalt Surface in Lay-down Yard North of Building 130 – Active " Physical hazards are controlled by the Site Occupational Safety and Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practice

6 DATA QUALITY ASSESSMENT

Data used in making management decisions for decommissioning of the Building 130 Warehouse and consequent waste management are of adequate quality to support the decisions documented in this report The data presented in this report (Attachments C and D) were verified and validated relative to DOE quality requirements, applicable EPA guidance, and original DQOs of the project

In summary, the Verification and Validation (V&V) process corroborates that the following elements of the characterization process are adequate

- the *number* of samples and surveys,
- the *types* of samples and surveys,
- the sampling/survey process as implemented "in the field", and,
- the laboratory analytical process, relative to accuracy and precision considerations

Details of the DQA are provided in Attachment E

7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The demolition and disposal of the Building 130 Warehouse will generate a variety of wastes Estimated waste types and waste volumes are presented below All waste can be disposed of as sanitary waste, except PCB Bulk Product Waste There is no radioactive, asbestos, beryllium or hazardous waste PCB ballasts will be managed pursuant to Site PCB abatement and waste management procedures

Waste Volume Estimates and Material Types							
Facility	**Concrete** (cu ft)	**Wood** (cu ft)	**Metal** (cu ft)	**Corrugated Sheet Metal** (cu ft)	**Wall Board** (cu ft)	**ACM** (cu ft)	**Other Waste**
Building 130 Warehouse	5,900	0	15,250	0	1,200	0	Built-up Roofing 5,200 cu ft

8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, the Building 130 Warehouse is classified as a RFCA Type 1 facility pursuant to the RFETS Decommissioning Program Plan (DPP, K-H, 1999) and can be demolished The Type 1 classification is based on a review of historical and process knowledge, and newly acquired RLC data

The RLC of the Building 130 Warehouse was performed in accordance with the DDCP and PDSP All PDSP DQOs were met, and all data satisfied the PDSP DQA criteria This facility does not contain radiological, asbestos, beryllium or hazardous wastes PCB ballasts will be managed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations Demolition debris will be managed in compliance with regulations governing PCBs (40 CFR 761), and Environmental Compliance Guidance #27, *Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal,* as applicable Environmental media beneath and surrounding the facilities will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA

To ensure this Type 1 facility remains free of contamination and RLC data remain valid, Level 2 Isolation Controls have been established and the facility posted accordingly

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9 REFERENCES

DOE/RFFO, CDPHE, EPA, 1996 Rocky Flats Cleanup Agreement (RFCA), July 19, 1996

DOE Order 5400 5, "Radiation Protection of the Public and the Environment "

EPA, 1994 "The Data Quality Objective Process," EPA QA/G-4

K-H, 1999 Decommissioning Program Plan, June 21, 1999

MAN-131-QAPM, *Kaiser-Hill Team Quality Assurance Program*, Rev 1, November 1, 2001

MAN-076-FDPM, *Facility Disposition Program Manual*, Rev 3, January 1, 2002

MAN-077-DDCP, *Decontamination and Decommissioning Characterization Protocol*, Rev 3, July 15, 2002

MAN-127-PDSP, *Pre-Demolition Survey Plan for D&D Facilities*, Rev 1, July 15, 2002

MARSSIM - Multi-Agency Radiation Survey and Site Investigation Manual, December 1997 (NUREG-1575, EPA 402-R-97-016)

PRO-475-RSP-16 01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation, and Closure*, Rev 1, May 22, 2001

PRO-476-RSP-16 02, *Pre-Demolition (Final Status) Radiological Surveys of Surfaces and Structures*, Rev 1, May 22, 2001

PRO-477-RSP-16 03, *Radiological Samples of Building Media*, Rev 1, May 22, 2001

PRO-478-RSP-16 04, *Radiological Survey/Sample Data Analysis for Final Status Survey*, Rev 1, May 22, 2001

PRO-479-RSP-16 05, *Radiological Survey/Sample Quality Control for Final Status Survey*, Rev 1, May 22, 2001

PRO-563-ACPR, Asbestos Characterization Procedure, Revision 0, August 24, 1999

PRO-536-BCPR, Beryllium Characterization Procedure, Revision 0, August 24, 1999

RFETS, Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition

RFETS, Environmental Waste Compliance Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal

RFCA Standard Operation Protocol for Recycling Concrete, September 28, 1999

Historical Site Assessment Report for the Area 5 - Group 5 Facilities, dated September 2002, Revision 0

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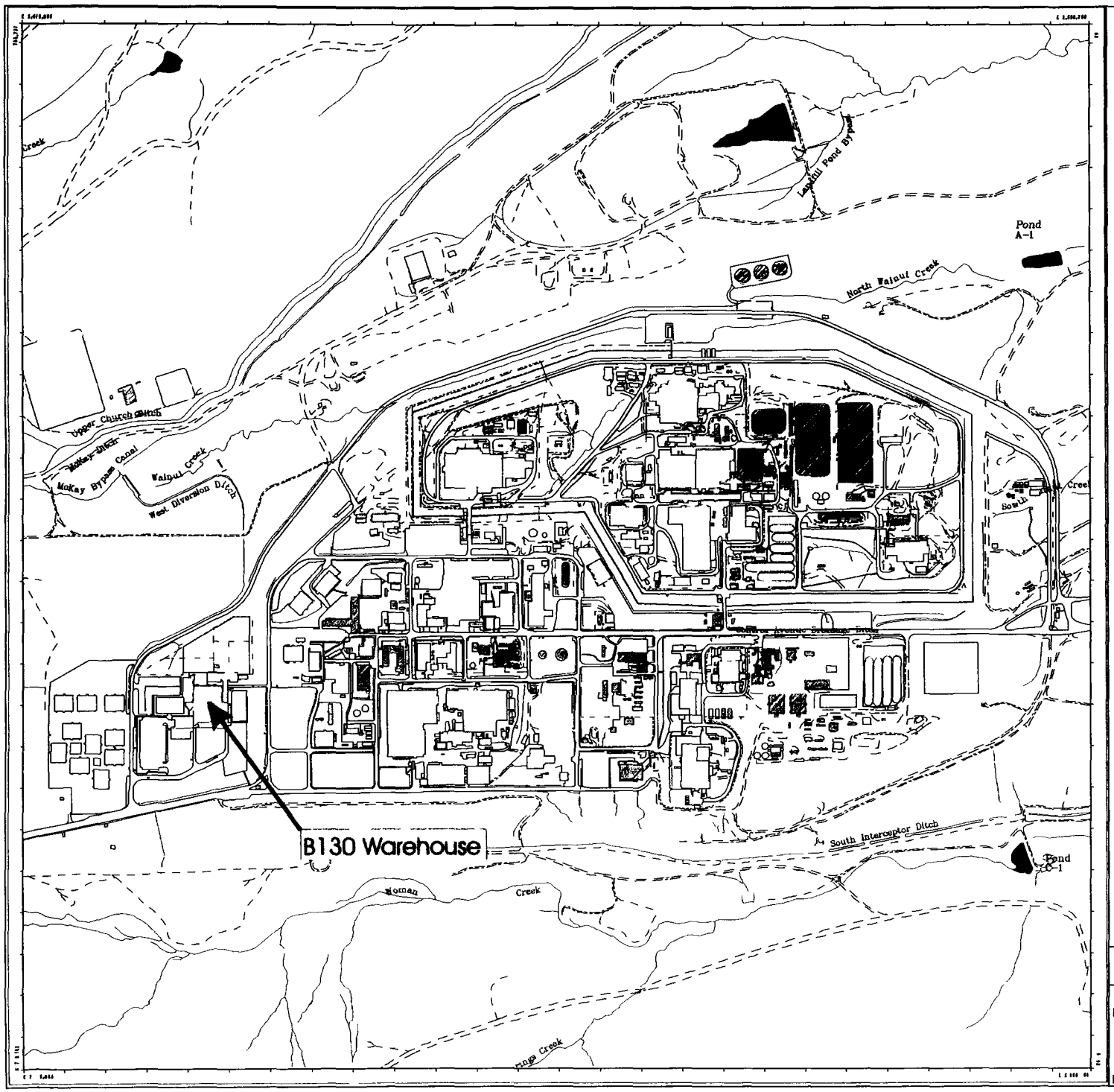
ATTACHMENT A

Facility Location Map



Building Location for Building 130 Warehouse

Standard Map Features

- Buildings and other structures
- Demolished buildings and other structures
- Lakes and ponds
- Streams ditches, or other drainage features
- Fences and other barriers
- Paved roads
- Dirt roads

DATA SOURCE BASE FEATURES
Buildings, fences, hydrography roads and other structures from 1994 aerial fly-over data captured by EG&G RSL Las Vegas
Digitized from the orthophotographs 1/95

Scale = 1 12450
1 inch represents approximately 1038 feet

250 0 500 1000ft

State Plane Coordinate Projection
Colorado Central Zone
Datum NAD27

U S Department of Energy
Rocky Flats Environmental Technology Site

GIS Dept 303-966-7707

Prepared by
CH2MHILL

Prepared for
KAISER HILL

MAP ID FY 2003

March 7 2003

NT_Svr w:/projects/03 0204/130 cdr

ATTACHMENT B

Historical Site Assessment Report

D&D RISS Facility Characterization
Historical Site Assessment Report
September, 2002 Rev. 0

Facility ID (AREA 5 GROUP 5) Buildings 130, 130 Cafeteria, 130 Warehouse, 131, T131A, T303E, and 130SY
Anticipated Facility Type (1, 2, or 3) Buildings 130, 130 Cafeteria, 130 Warehouse, 131, T131A, T303E, and 130SY are anticipated Type 1 facilities

This facility-specific Historical Site Assessment (HSA) has been performed in accordance with
D&D Characterization Protocol, RFETS MAN-077-DDCP, latest version, and
Facility Disposition Program Manual, RFETS MAN-076-FDPM, latest version

Physical Description

Building 130 Administrative

Building 130 is a 44,661 square foot, two-story structure built in 1985 The structure is a pre-fabricated building built on a concrete foundation The above-grade exterior walls are constructed of insulation-filled aluminum panels attached to a steel frame The roof is constructed of metal decking with built-up roofing Building 130 is configured with both hard-walled offices and cubical offices The ceilings are 2-foot by 4-foot acoustical panels with recessed light fixtures The floors are mostly carpeted with ceramic tile in the bathrooms, and vinyl tile in the supply rooms and janitorial closets

Building 130 has the following utilities Electric, plant water, plant sanitary, natural gas, and fire suppression is provided by a water sprinkler system and wall-mounted fire extinguishers

Building 130 Cafeteria

Building 130 Cafeteria is a 13,317 square foot structure built in 1985 The structure is a pre-fabricated building built on a concrete foundation The above-grade exterior walls are constructed of insulation-filled aluminum panels attached to a steel frame The roof is constructed of metal decking with built-up roofing Building 130 is configured with kitchen and food storage area, a food serving area, and a dinning area The floors are mostly vinyl tiles

Building 130 Cafeteria has the following utilities Electric, plant water, plant sanitary, natural gas, and fire suppression is provided by a water sprinkler system and wall-mounted fire extinguishers

Building 130 Warehouse

Building 130 Warehouse is a 27,6755 square foot structure built in 1985 The structure is a pre-fabricated building built on a concrete foundation The above-grade exterior walls are constructed primarily of cement bricks with a steel I-beam frame The roof is constructed of metal decking with built-up roofing Building 130 is configured with a large warehouse area, shipping docks, several small hard-walled offices The floors are primarily sealed concrete and the some offices have carpet

Building 130 Warehouse has the following utilities Electric, plant water, plant sanitary, natural gas, and fire suppression is provided by a water sprinkler system and wall-mounted fire extinguishers

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Building 131

Building 131 is a 22,000 square foot, single-story structure built in 1987 The structure is a pre-fabricated building built on a concrete foundation The above-grade exterior walls are constructed of insulation-filled aluminum panels attached to a steel frame The roof is constructed of metal decking with built-up roofing Building 131 is configured with both hard-walled offices and cubical offices The ceilings are 2-foot by 4-foot acoustical panels with recessed light fixtures

Building 131 has the following utilities Electric, Plant water, plant sanitary, natural gas, and fire suppression is provided by a water sprinkler system and wall-mounted fire extinguishers

Trailer T131A

Trailer T131A is a 1960 square foot office trailer acquired in 1991 T131A has corrugated metal siding with corrugated metal skirting The entrances have wooden stairs leading to a wooded enclosure The interior is configured with both cubicles and hard-walled offices Interior walls are wallboard The ceiling is a drop ceiling with acoustical tiles and recessed lights The floor is primarily covered with carpet

Trailer T131A has the following utilities electrical, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers

Trailer T303E

Trailer T303E is a 210 square foot field office trailer with no official date of purchase From a physical walk-down of the trailer it appears to have been manufactured in the late 1970's or early 1980s T303E has corrugated metal siding with no skirting The trailer is not in service and has no stairs leading to the entrances Interior walls are wood paneling The ceiling constructed of a fiberboard with surface mounted lights The floor is carpeted T303E is normally stored in the 130SY Storage Yard when not in us at a short-term field project Currently this trailer is being stored (and not currently operational) southeast of Building 771

Trailer T303E has the following utilities electrical, and fire protection is provided wall mounted fire extinguishers

130SY StorageYard

The 130SY Storage Yard is a large fenced in storage area with no designated square footage and is located north of Building 130 The storage yard is primarily covered with asphalt, but does has a small gravel area used by KH construction to store construction material and equipment This storage yard was constructed in approximately 1985 when the 130 warehouse was constructed Photographs indicate the 130SY Storage Yard was paved with asphalt at approximately the same time as its construction date The 130SY Storage Yard has no utilities

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Historical Operations

Building 130

The 130 administrative building has always been and an administrative building, which has housed such organizations as project engineering group, the document control, and procurement

Building 130 Cafeteria

The 130 Cafeteria has always been a cafeteria

Building 130 Warehouse

The 130 Warehouse is the primary shipping and receiving facility for the Site Building 130 Warehouse does not act as a storage facility, but receives vender supplied material and then distributed these materials throughout the site On occasion the building receives and ships, small quantities of hazardous material, but is not a permitted storage unit and there have been no spills due to this activity The 130 Warehouse is also used as the clearinghouse for the site laundry between the generators to the off-site vender for cleaning The boxes used to transport the dirty laundry are staged in a RMA There is no building contamination associated with this activity Also, on the west end of the building a small caged area is labeled as a RMA and is used to stage the occasional radiological source or other low level radiological material that on occasion is shipped though Building 130 Warehouse From 1985 until the mid 1990's the east end of the warehouse had NDA equipment that was used for quality control inspections on incoming material In the Mid 1990s this equipment was removed and the area was used to stage laundry going to an outside vender

Building 131

Building 131 has always been used as an administrative office building Building 131 originally housed such organizations as DOE, Procurement, site employment, and currently houses site training

Trailer T131A

Trailer T131A was originally used by the site's Salary Compensation Organization and was later used to house the instructors for the Training Organization located in Building 131

Trailer T303E

The trailer was used throughout the site for a variety of field administrative uses These uses included being used by the emergency preparedness group and as a field office trailer for a variety of short-term field operations When not in use the trailer is stored in the 130 SY Storage Yard Mr Padilla used the trailer as a field trailer to complete paperwork and perform various administrative activities for the transportation department in the early 2000s T303E is normally stored in the 130SY Storage Yard when not in us on a short-term field project Currently this trailer is being stored (and not currently operational) southeast of Building 771

130SY StorageYard

The 130 SY Storage Yard was originally used to stage and store stocks of stainless steel, iron and other material that was machined milled and consumed at Rocky Flats The east and west part of the yard is currently used to stage empty cargo containers awaiting transfer to various on-site buildings Waste management uses the north part of the yard to stage filled and empty cargo waste containers, and PU&D uses the northwest portion of the yard to stage equipment destined for offsite disposal or re-sale KH construction uses the southwest portion of the yard as a general lay-down area

Current Operational Status

The 130 Administrative Building, 130 Cafeteria, 130 Warehouse, Building 131, Trailer T131A and the 130SY Storage Yard are all active Trailer T303E is not active

Contaminants of Concern

Asbestos

Describe any potential, likely, or known sources of Asbestos

None of the buildings addressed in this HSA have an asbestos posting None of the buildings in this HSA have had a comprehensive building inspection

Beryllium (Be)

Describe any potential, likely, or known Be production or storage locations

None of the buildings addressed in this HSA are on the list of Be areas

Summarize any recent Be sampling results

There have been no recent Be samples collected on any of these facilities

Lead

Describe any potential, likely, or known sources of Lead (e g , paint, shielding, etc)

Based on the age of the buildings addressed in this HSA lead in paint should not be a concern No processes containing lead were conducted in these facilities However, the 130 SY Storage Yard has a battery spill in 1993 See PAC 100-613, "Asphalt Surface in Lay-down Yard North of Building 130"

RCRA/CERCLA Constituents

Describe any potential, likely, or known sources of RCRA/CERCLA constituents (e g , chemical storage, waste storage, and processes)

On occasion cargo containers containing low levels of radiological material was staged by material stewardship in this lay-down yard prior to being shipped off site There is no evidence of contamination associated with this activity

See the Historical operations section above for a more detailed listing of the operations which occurred in the facilities addressed in this HSA

In 1993 several batteries fell off the pallet they where being moved on This incident is documented in PAC 100-613, "Asphalt Surface in Lay-down Yard North of Building 130"

Describe any potential, likely, or known spill locations (and sources, if any)

In 1993 several batteries fell off the pallet they where being moved on This incident is documented in PAC 100-613, "Asphalt Surface in Lay-down Yard North of Building 130"

Describe methods in which spills were mitigated, if any

Material was neutralized using Sodium Bicarbonate and was placed in a 90 storage area until disposed of

PCBs

Describe any potential, likely, or known sources of PCBs (e g , light ballasts, paints, equipment, etc)

None of the facilities addressed in this HSA have a history of housing any PCB continuing processes Based on the age of construction these buildings, PCBs in paint should not be a concern

Describe any potential, likely, or known spill locations (and sources, if any)

No PCB spills occurred in any of the facilities addressed in this HSA

Describe methods in which spills were mitigated, if any

No PCB spills occurred in any of the facilities addressed in this HSA

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Radiological Contaminants
Describe any potential, likely, or known radiological production or storage locations

The 130 Warehoused has two RMAs One was established to handles the shipping of laundry to an offsite vendor and the other was established to handle the occasional non-routine shipping of a sealed source or other small quantity of low level radiological material, which was not shipped directly off site by the Traffic Department On occasion cargo containers containing low levels of radiological material was staged by material stewardship in the 130SY Storage Yard prior to being shipped off site There is no evidence of contamination associated with this activity The remaining buildings in this HSA have no history of radiological operation

See the Historical operations section above for a more detailed listing of the operations, which occurred in the facilities addressed in this HSA

Describe any potential, likely, or known spill locations (e g , known leaking sealed radioactive sources, leaking waste drums, potentially contaminated drains, etc)

None

Describe methods in which spills were mitigated, f any

None

Describe any potential, likely, or known isotopes of concern (e g , weapons grade plutonium, uranium isotopes, pure beta emitters, mixed fission products, etc)

None

Describe any potential, likely, or known external facility contamination (e g , stack release points, unfiltered ventilation, facility's physical location to known site releases, etc)

See section below for information on IHSSs PACs, and UBCs

Environmental Restoration Concerns
Describe any ER concerns that could affect facility characterization (e g , IHSSs, PACs, UBCs)

The 130 SY Storage Yard is associated with the following PAC

1) See PAC 100-613, "Asphalt Surface in Lay-down Yard North of Building 130", Active

The remaining facilities addressed in this HSA are not associated with any IHSSs, PACs, or UBCs

Additional Information
Describe any additional information that may be useful during facility characterization (e g , contaminant migration routes, waste handling operations, physical hazards, Historical Release Reports, WSRIC data, etc)

None

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References

Provide all sources of information utilized to gather data for facility history (e g , documents, files, interviews)

Sources reviewed to complete this HSA were the RFETS Facility List, the Historical Release Report, Site Master List of RCRA Units, and the Site IHSS, PAC, and UBC databases The WSRIC for those buildings with a WSRIC In addition, a facility walkdown and interviews were performed

Waste Volume Estimates and Material Types

Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste (cu ft)
Building 130	10,600	0	24,500	0	6,800	TBD	Built-up Roofing 9,600 cu ft
Building 130 Cafeteria	2,900	0	7,200	0	1,700	TBD	Built-up Roofing 2,600 cu ft
Building 130 Warehouse	5,900	0	15,250	0	1,200	TBD	Built-up Roofing 5,200 cu ft
Building 131	5,300	0	12,250	0	3,400	TBD	Built-up Roofing 4,800 cu ft
Trailer T131A	0	700	700	750	800	TBD	N/A
Trailer T303E	0	100	100	100	50	TBD	N/A
130SY StorageYard	0	0	1200	0	0	TBD	Asphalt – 20,000 cu ft

Further Actions

Recommend any further actions, if any (e g , characterization, decontamination, special handling, etc)

Begin the RLC/PDS process

Note

This HSA was performed prior to SME walkdowns, and chemical and radiological characterization package preparations SMEs should evaluate and/or verify all information during the RLC/PDS process SMEs may need to review additional documentation and perform additional interviews Information contained in this HSA only represents a "snapshot" in time Subsequent data may be obtained during SME walkdowns and chemical and radiological characterization package preparations, which may conflict with this report However, this report will not be amended, and the newer data will take precedence over the data in this report Newer Data will appear in the RLCR/PDSR

Prepared By Doug Bryant / Doug Bryant / September 2002
Name Signature Date

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ATTACHMENT C

Radiological Data Summaries and Survey Maps

Survey Area 5	Survey Unit 130W03	Building B130
Description: B130 Warehouse (Interior)		

Rocky Flats Environmental Technology Site
Final Radiological Survey Summary Results

Total Surface Activity Measurements

Number Required 38 Number Performed 38 Number QC Performed 4

Alpha - Random

Maximum	62 3 dpm/100cm²
Minimum	<5 0> dpm/100cm²
Mean	12 7 dpm/100cm²
Standard Deviation	12 6
Transuranic DCGLw	100 0 dpm/100cm²
Transuranic DCGLemc	300 0 dpm/100cm²
Uranium DCGLw	5,000 0 dpm/100cm²
Uranium DCGLemc	15,000 0 dpm/100cm²

* Biased TSA and QC measurements not included in above statistics

Removable Surface Activity Measurements

Number Required 38 Number Performed 38

Alpha - Random

Maximum	3 0 dpm/100cm²
Minimum	<0 6> dpm/100cm²
Mean	0 1 dpm/100cm²
Standard Deviation	0 9
Transuranic DCGLw	20 0 dpm/100cm²
Uranium DCGLw	1,000 0 dpm/100cm²

* Biased RSA measurements not included in above statistics

Media Sample Results

Number Required 0 Number Collected 0

Survey Area: 5	Survey Unit. 130W03	Building. B130
Description. B130 Warehouse (Interior)		

Instrument Data Sheet

Inst/RCT Number	RCT ID	Analysis Date	Instr Model	Instru S/N	Probe Type	Calibration Due Dt	Instru Efficiency		A-Priori MDA (dpm/100cm²)	
							Alpha	Beta	Alpha	Beta
1	711799	03/30/04	Electra	1379	DP-6	08/03/04	0 208	NA	48 00	NA
2	511390	03/30/04	Electra	1833	DP-6	09/03/04	0 214	NA	48 00	NA
3	512590	03/30/04	Electra	2352	DP-6	05/11/04	0 225	NA	48 00	NA
4	711799	03/30/04	Electra	632	DP-6	07/07/04	0 183	NA	48 00	NA
5	512590	03/31/04	Electra	1379	DP-6	08/03/04	0 208	NA	48 00	NA
6	511390	03/31/04	Electra	2352	DP-6	05/11/04	0 225	NA	48 00	NA
7	711799	03/31/04	Electra	632	DP-6	07/07/04	0 183	NA	48 00	NA
8	512590	03/31/04	SAC-4	924	NA	04/27/04	0 330	NA	10 00	NA
9	512590	03/31/04	SAC-4	966	NA	07/26/04	0 330	NA	10 00	NA
10	512590	03/31/04	SAC-4	845	NA	04/23/04	0 330	NA	10 00	NA
11	512590	03/31/04	SAC-4	830	NA	04/22/04	0 330	NA	10 00	NA

Survey Area 5	Survey Unit. 130W03	Building B130
Description B130 Warehouse (Interior)		

Removable Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130W03PRP-N001	8	- 3	N/A	
130W03PRP-N002	9	- 6	N/A	
130W03PRP-N003	10	0	N/A	
130W03PRP-N004	11	- 6	N/A	
130W03PRP-N005	8	- 3	N/A	
130W03PRP-N006	9	- 6	N/A	
130W03PRP-N007	10	0	N/A	
130W03PRP-N008	11	2 4	N/A	
130W03PRP-N009	8	1 2	N/A	
130W03PRP-N010	9	- 6	N/A	
130W03PRP-N011	10	0	N/A	
130W03PRP-N012	11	- 6	N/A	
130W03PRP-N013	8	- 3	N/A	
130W03PRP-N014	9	- 6	N/A	
130W03PRP-N015	10	1 5	N/A	
130W03PRP-N016	11	- 6	N/A	
130W03PRP-N017	8	- 3	N/A	
130W03PRP-N018	9	- 6	N/A	
130W03PRP-N019	10	0	N/A	
130W03PRP-N020	11	- 6	N/A	
130W03PRP-N021	8	- 3	N/A	
130W03PRP-N022	9	9	N/A	
130W03PRP-N023	10	0	N/A	
130W03PRP-N024	11	9	N/A	
130W03PRP-N025	8	1 2	N/A	
130W03PRP-N026	9	- 6	N/A	
130W03PRP-N027	10	0	N/A	
130W03PRP-N028	11	9	N/A	
130W03PRP-N029	8	- 3	N/A	
130W03PRP-N030	9	- 6	N/A	

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Survey Area 5	Survey Unit 130W03	Building. B130
Description : B130 Warehouse (Interior)		

Removable Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130W03PRP-N031	10	1 5	N/A	
130W03PRP-N032	11	- 6	N/A	
130W03PRP-N033	8	- 3	N/A	
130W03PRP-N034	9	- 6	N/A	
130W03PRP-N035	10	3 0	N/A	
130W03PRP-N036	11	- 6	N/A	
130W03PRP-N037	8	1 2	N/A	
130W03PRP-N038	9	- 6	N/A	

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130W03PBP-N039	10	0	N/A	
130W03PBP-N040	11	9	N/A	
130W03PBP-N041	8	1 2	N/A	
130W03PBP-N042	9	9	N/A	
130W03PBP-N043	10	0	N/A	
130W03PBP-N044	11	- 6	N/A	
130W03PBP-N045	8	- 3	N/A	
130W03PBP-N046	9	- 6	N/A	
130W03PBP-N047	10	0	N/A	
130W03PBP-N048	11	- 6	N/A	
130W03PBP-N049	8	- 3	N/A	
130W03PBP-N050	9	- 6	N/A	
130W03PBP-N051	10	0	N/A	
130W03PBP-N052	11	9	N/A	
130W03PBP-N053	8	- 3	N/A	
130W03PBP-N054	9	9	N/A	
130W03PBP-N055	10	0	N/A	
130W03PBP-N056	11	- 6	N/A	

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Survey Area 5	Survey Unit 130W03	Building B130
Description B130 Warehouse (Interior)		

Removable Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130W03PBP-N057	8	- 3	N/A	
130W03PBP-N058	9	9	N/A	
130W03PBP-N059	10	0	N/A	
130W03PBP-N060	11	- 6	N/A	
130W03PBP-N061	8	1 2	N/A	
130W03PBP-N062	9	- 6	N/A	
130W03PBP-N063	10	1 5	N/A	
130W03PBP-N064	11	- 6	N/A	
130W03PBP-N065	8	- 3	N/A	
130W03PBP-N066	9	- 6	N/A	
130W03PBP-N067	10	0	N/A	
130W03PBP-N068	11	- 6	N/A	
130W03PBP-N069	8	1 2	N/A	
130W03PBP-N070	9	- 6	N/A	
130W03PBP-N071	10	0	N/A	
130W03PBP-N072	11	- 6	N/A	
130W03PBP-N073	8	1 2	N/A	
130W03PBP-N074	9	9	N/A	
130W03PBP-N075	10	0	N/A	
130W03PBP-N076	11	9	N/A	
130W03PBP-N077	8	- 3	N/A	
130W03PBP-N078	9	9	N/A	

Comments None

Survey Area 5	Survey Unit: 130W03	Building - B130
Description B130 Warehouse (Interior)		

Total Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130W03PRP-N001	1	25 3	N/A	
130W03QRP-N001	3	4	N/A	
130W03PRP-N002	1	20 5	N/A	
130W03PRP-N003	1	26 7	N/A	
130W03QRP-N003	2	-1 7	N/A	
130W03PRP-N004	1	4 6	N/A	
130W03PRP-N005	1	1 3	N/A	
130W03PRP-N006	1	10 9	N/A	
130W03PRP-N007	5	17 1	N/A	
130W03PRP-N008	1	62 3	N/A	
130W03PRP-N009	5	4 6	N/A	
130W03PRP-N010	1	1 3	N/A	
130W03PRP-N011	5	-5 0	N/A	
130W03PRP-N012	1	-5 0	N/A	
130W03PRP-N013	1	34 9	N/A	
130W03PRP-N014	3	15 2	N/A	
130W03PRP-N015	1	14 2	N/A	
130W03PRP-N016	5	6 1	N/A	
130W03PRP-N017	5	1 3	N/A	
130W03PRP-N018	1	10 9	N/A	
130W03PRP-N019	1	14 2	N/A	
130W03QRP-N019	3	62 6	N/A	
130W03PRP-N020	1	7 5	N/A	
130W03PRP-N021	5	17 1	N/A	
130W03PRP-N022	3	21 4	N/A	
130W03QRP-N023	1	14 5	N/A	
130W03PRP-N023	2	22 9	N/A	
130W03PRP-N024	5	4 6	N/A	

Survey Area 5	Survey Unit. 130W03	Building B130
Description B130 Warehouse (Interior)		

Total Surface Activity Data Sheet

Random Measurement Location	Inst / RCT Nbr	*Net Alpha* (dpm/100cm²)	*Net Beta* (dpm/100cm²)	
130W03PRP-N025	1	7 5	N/A	
130W03PRP-N026	1	9 4	N/A	
130W03PRP-N027	1	26 7	N/A	
130W03PRP-N028	1	-2 1	N/A	
130W03PRP-N029	1	14 2	N/A	
130W03PRP-N030	1	14 2	N/A	
130W03PRP-N031	1	7 5	N/A	
130W03PRP-N032	3	21 4	N/A	
130W03PRP-N033	3	3 6	N/A	
130W03PRP-N034	1	-2 1	N/A	
130W03PRP-N035	3	9 4	N/A	
130W03PRP-N036	1	17 1	N/A	
130W03PRP-N037	5	17 1	N/A	
130W03PRP-N038	5	4 6	N/A	

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130W03PBP-N039	1	-2 3	N/A	
130W03PBP-N040	2	53 6	N/A	
130W03PBP-N041	2	18 1	N/A	
130W03PBP-N042	3	39 0	N/A	
130W03PBP-N043	3	9 2	N/A	
130W03PBP-N044	2	-2 5	N/A	
130W03PBP-N045	1	-2 3	N/A	
130W03PBP-N046	2	8	N/A	
130W03PBP-N047	2	22 8	N/A	
130W03PBP-N048	3	3 5	N/A	
130W03PBP-N049	2	4 1	N/A	
130W03PBP-N050	2	18 1	N/A	

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Survey Area 5	Survey Unit 130W03	Building B130
Description B130 Warehouse (Interior)		

Total Surface Activity Data Sheet

Biased Measurement Location	Inst / RCT Nbr	Net Alpha (dpm/100cm²)	Net Beta (dpm/100cm²)	
130W03PBP-N051	2	4 1	N/A	
130W03PBP-N052	2	13 4	N/A	
130W03PBP-N053	2	4 1	N/A	
130W03PBP-N054	2	8	N/A	
130W03PBP-N055	2	16 2	N/A	
130W03PBP-N056	1	7 3	N/A	
130W03PBP-N057	1	-8 6	N/A	
130W03PBP-N058	1	-2 3	N/A	
130W03PBP-N059	1	10 7	N/A	
130W03PBP-N060	2	13 4	N/A	
130W03PBP-N061	1	21 7	N/A	
130W03PBP-N062	1	16 9	N/A	
130W03PBP-N063	2	6 9	N/A	
130W03PBP-N064	2	8	N/A	
130W03PBP-N065	1	10 7	N/A	
130W03PBP-N066	1	4 4	N/A	
130W03PBP-N067	1	-5 2	N/A	
130W03PBP-N068	1	4 4	N/A	
130W03PBP-N069	1	18 9	N/A	
130W03PBP-N070	1	1 1	N/A	
130W03PBP-N071	1	-5 2	N/A	
130W03PBP-N072	1	7 3	N/A	
130W03PBP-N073	1	4 4	N/A	
130W03PBP-N074	1	-8 6	N/A	
130W03PBP-N075	3	9 2	N/A	
130W03PBP-N076	3	12 3	N/A	
130W03PBP-N077	2	19 5	N/A	
130W03PBP-N078	1	1 1	N/A	

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Survey Area. 5	Survey Unit 130W03	Building B130
Description B130 Warehouse (Interior)		

Total Surface Activity Data Sheet

Comments None

ATTACHMENT D

Chemical Data Summaries and Sample Maps

Asbestos Data Summary
Building 130 Warehouse

Sample Number	Map Survey Location	Room	Material Sampled and Location	Analytical Results
RIN - 03Z1823				
130Ware-06052003-315-201	1	Warehouse office	White/gray ceiling tile (2'x4')	Non-Detect
130Ware-06052003-315-202	2	Warehouse office	Plaster w/green paint	Non-Detect
130Ware-06052003-315-203	3	Warehouse office	White mud w/white paint, Tan/pink drywall	Non-Detect
130Ware-06052003-315-204	4	Room 176	Gray granular plaster w/white paint	Non-Detect
130Ware-06052003-315-205	5	Room 176	Gray granular plaster w/white paint	Non-Detect
130Ware-06052003-315-206	6	Room 182	White plaster w/green paint	Non-Detect
130Ware-06052003-315-207	7	Room 245	Black mastic/Tan tile	Non-Detect
130Ware-06052003-315-208	8	Room 243	Black mastic/Tan tile	Non-Detect
130Ware-06052003-315-209	9	Room 174	White/gray ceiling tile (2'x4')	Non-Detect

Beryllium Data Summary
Building 130 Warehouse

Sample Number	Map Survey Point Location	Room	Sample Location	Result ($ug/100\ cm^2$)
	RIN - 03Z1822			
0321822-001	1	179	Top of 480V 3 Phase electrical panel, south wall	<0 1
0321822-002	2	179	On concrete floor by sanitary drain, east wall	<0 1
0321822-003	3	179	On concrete floor by rollers for packing	<0 1
0321822-004	4	179	Top of fiber optic panel, north wall	<0 1
0321822-005	5	179	On concrete floor b door #9, north wall	<0 1
0321822-006	6	179	Top of horizontal steel I bean at Door # 8	<0 1
0321822-007	7	179	Top of brown tank, 450-246, in mechanical room 185	<0 1
0321822-008	8	179	Top of fiberglass pipe run above water heater	<0 1
0321822-009	9	179	Top of metal I-Beam sway brace, south wall	<0 1
0321822-010	10	179	On 12th vinyl floor tile by metal storage cabinets	<0 1
	RIN - 04Z1262			
130-03012004-9-001	11	179	Top electrical cabinet, Bay 1, LP2m27B	<0 1
130-03012004-9-002	12	179	Top of file cabinet #12244 in Bay 1	<0 1
130-03012004-9-003	13	179	N Wall of Bay 1, Top of panel MU139-1A-25	<0 1
130-03012004-9-004	14	179	Center of floor, Bay 2	<0 1
130-03012004-9-005	15	179	Inside of door Bay 3, floor drain	<0 1
130-03012004-9-006	16	179	Bay 4, Drum top "oil dri"	<0 1
130-03012004-9-007	17	179	Room, 178 window ledge	<0 1
130-03012004-9-008	18	179	Pipe Insulation above water tank	<0 1
130-03012004-9-009	19	179	Upper floor, light fixture door 241N	<0 1
130-03012004-9-010	20	179	Upper floor, light fixture door 241S	<0 1
130-03012004-9-011	21	243	Men's Locker Room, Top of lockers	<0 1
130-03012004-9-012	22	16	2nd floor, S End, top of electric panel S10-130-02	<0 1

ATTACHMENT E

Data Quality Assessment (DQA) Detail

DATA QUALITY ASSESSMENT (DQA)

VERIFICATION & VALIDATION OF RESULTS

V&V of the data confirm that appropriate quality controls are implemented throughout the sampling and analysis process, and that any substandard controls result in qualification or rejection of the data in question The required quality controls and their implementation are summarized in a tabular, checklist format for each category of data – radiological surveys and chemical analyses (specifically asbestos and beryllium)

DQA criteria and results are provided in a tabular format for each suite of surveys or chemical analyses performed, the radiological survey assessment is provided in Table E-1, asbestos in E-2, and beryllium in E-3 A data completeness summary for all results is given in Table E-4

All relevant Quality records supporting this report are maintained in the RISS Characterization Project Files This report will be submitted to the CERCLA Administrative Record for permanent storage within 30 days of approval by the Regulators All radiological data are organized into Survey Packages, which correlate to unique (MARSSIM) Survey Units Chemical data are organized by RIN (Report Identification Number) and are traceable to the sample number and corresponding sample location

Beta/gamma survey designs were not implemented for the Building 130 Warehouse based on the conservatism of the transuranic limits used as DCGLs in the unrestricted release decision process Survey designs were implemented based on the transuranic limits used as DCGLs in the unrestricted release decision process All survey results were evaluated against, and were less than the Transuranic $DCGL_w$ (100 dpm/100cm^2) and the Uranium $DCGL_w$ (5,000 dpm/100cm^2) unrestricted release limits

Consistent with EPA's G-4 DQO process, the radiological survey design (for those survey units performed per PDS requirements) was optimized by checking actual measurement results (acquired during pre-demolition surveys) against model output with original estimates Use of actual sample/survey (result) variances in the MARSSIM DQO model confirms that an adequate number of surveys were acquired

SUMMARY

In summary, the data presented in this report have been verified and validated relative to the quality requirements and project decisions as stated in the original DQOs All data are useable based on qualifications stated herein and are considered satisfactory without qualification All media surveyed and sampled yielded results less than their associated action levels and with acceptable certainties except the for the following materials

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Based upon an independent review of the radiological data, it is determined that the original project DQOs satisfied MARSSIM guidance All facility contamination levels were below applicable unrestricted release levels Minimum survey requirements were met, sampling/survey protocol was performed in accordance with applicable procedures, survey units were properly designed and bounded, and instrument performance and calibration was within acceptable limits All radiological and non-radiological results meet the PDS unrestricted release criteria

Chain of Custody was intact, documentation was complete, hold times were acceptable (where applicable,) and packaging integrity/custody seals were maintained throughout the sampling/analysis process Level 2 Isolation Controls have been posted to prevent the inadvertent introduction of contamination into the facility On this basis, the Building 130 Warehouse meets the unrestricted release criteria with the confidences stated herein

Table E-1 V&V of Radiological Surveys – Building 130 Warehouse

V&V CRITERIA, RADIOLGICAL SURVEYS		K-H RSP 16 00 Series MARSSIM (NUREG-1575)		
QUALITY REQUIREMENTS				
	Parameters	**Measure**	**frequency**	**COMMENTS**
ACCURACY	initial calibrations	90%<x<110%	≥1	Multi-point calibration through the measurement range encountered in the field, programmatic records
	daily source checks	80%<x<120%	≥1/day	Performed daily/within range
	local area background Field	typically < 10 dpm	≥1/day	All local area backgrounds were within expected ranges (i e , no elevated anomalies)
PRECISION	field duplicate measurements for TSA	≥5% of real survey points	≥10% of reals	N/A
REPRESENTATIVENESS	MARSSIM methodology Survey Units 130W03 (interior) and EXT-B-001 (exterior)	statistical and biased	NA	Random w/ statistical confidence
	Survey Maps	NA	NA	Random and biased measurement locations controlled/mapped to ±1m
	Controlling Documents (Characterization Pkg, RSPs)	qualitative	NA	Refer to the Characterization Package (planning document) for field/sampling procedures (located in Project files), thorough documentation of the planning, sampling/analysis process, and data reduction into formats
COMPARABILITY	units of measure	dpm/100cm^2	NA	Use of standardized engineering units in the reporting of measurement results
COMPLETENESS	Plan vs Actual surveys usable results vs unusable	>95% >95%	NA	See Table E-4 for details
SENSITIVITY	detection limits	TSA ≤50 dpm/100cm^2 RA ≤10 dpm/100cm^2	all measures	MDAs ≤ 50% DCGL$_w$ per MARSSIM guidelines

Table E-2 V&V of Asbestos Results – Building 130 Warehouse

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
ASBESTOS	METHOD EPA 600/R-93/116	LAB ---->	Reservoirs Environmental, Inc	
QUALITY REQUIREMENT		RIN ---->	RIN03Z1823	
		Measure	Frequency	COMMENTS
ACCURACY	Calibrations Initial/continuing	below detectable amounts	≥1	Semi-quantitative, per (microscopic) visual estimation
PRECISION	Actual Number Sampled LCSD Lab duplicates	all below detectable amounts	≥ 9 samples	Semi-quantitative, per (microscopic) visual estimation
REPRESENTATIVENESS	COC	Qualitative	NA	Chain-of-Custody intact completed paperwork, containers w/ custody seals
	Hold times/preservation	Qualitative	NA	N/A
	Controlling Documents (Plans, Procedures, maps, etc)	Qualitative	NA	See original Chemical Characterization Package (planning document), for field/sampling procedures (located in project file,) thorough documentation of the planning, sampling/analysis process, and data reduction into formats
COMPARABILITY	Measurement Units	% by bulk volume	NA	Use of standardized engineering units in the reporting of measurement results
COMPLETENESS	Plan vs Actual samples Usable results vs unusable	Qualitative	NA	See Table E-4, final number of samples at Certified Inspector's discretion
SENSITIVITY	Detection limits	<1% by volume	all measures	N/A

Table E-3 V&V of Beryllium Results – Building 130 Warehouse

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
BERYLLIUM	Prep NMAM 7300 METHOD OSHA ID-125G	LAB ---->	Reservoirs Environmental, Inc	
QUALITY REQUIREMENTS		RIN ---->	RIN03Z1822 (samples 1 thru 11) RIN04Z1262 (samples 12 thru 22)	
		Measure	Frequency	COMMENTS
ACCURACY	Calibrations Initial	Linear calibration	≥1	No qualifications significant enough to change project decisions i e , classification of a Type 1 facility confirmed All results were below associated action levels
	Continuing	80%<%R<120 %	≥1	
	LCS/MS	80%<%R<120 %	≥1	
	Blanks - lab & field	<MDL	≥1	
	interference check std (ICP)	NA	NA	
PRECISION	LCSD	80%<%R<120 % (RPD<20%)	≥1	
	field duplicate	all results < RL	≥1	
REPRESENTATIVENESS	COC	Qualitative	NA	
	hold times/preservation	Qualitative	NA	
	Controlling Documents (Plans, Procedures, maps, etc)	Qualitative	NA	
COMPARABILITY	measurement units	ug/100cm^2	NA	
COMPLETENESS	Plan vs Actual samples usable results vs unusable	>95% >95%	NA	
SENSITIVITY	detection limits	MDL of 0 012 ug/100cm^2	all measures	

Table E-4 Data Completeness Summary – Building 130 Warehouse

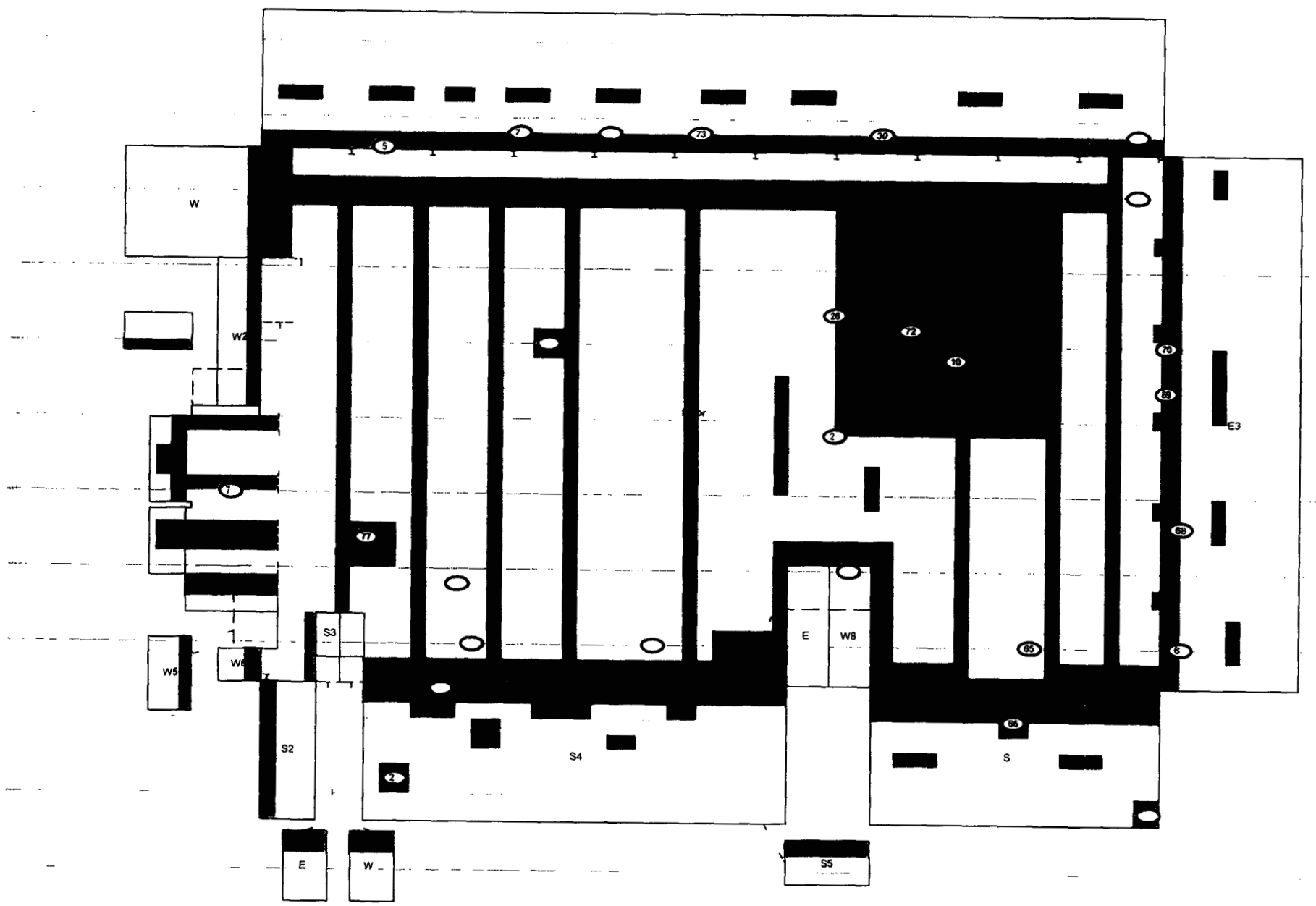
ANALYTE	Building/Area /Unit	Sample Number Planned (Real & QC)	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc)
Asbestos	Building 130 Warehouse	12 biased	10 biased	No ACM present, all results < 1% by volume	40 CFR763 86, 5 CCR 1001-10, EPA 600/R-93/116 RIN03Z1823
Beryllium	Building 130 Warehouse	10 biased (interior)	22 biased (interior)	No beryllium contamination found, all results less than associated action levels	OSHA ID-125G RIN03Z1822 (samples 1 through 11) RIN04Z1262 (samples 12 through 22) No results above action level (0 2ug/100cm^2) or investigative level (0 1 ug/100cm^2)
Radiological	Survey Area 5 Survey Unit 130W03 Building 130 Warehouse (interior)	78 α TSA (38 random/40 biased) and 78 α Smears (38 random/40 biased) 4 QC TSA 5% scan of all interior surfaces, and 100% scan of RMA's	78 α TSA (38 random/40 biased) and 78 α Smears (38 random/40 biased) 3 QC TSA 5% scan of all interior surfaces, and 100% scan of RMA's	No elevated contamination found at any location, all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable

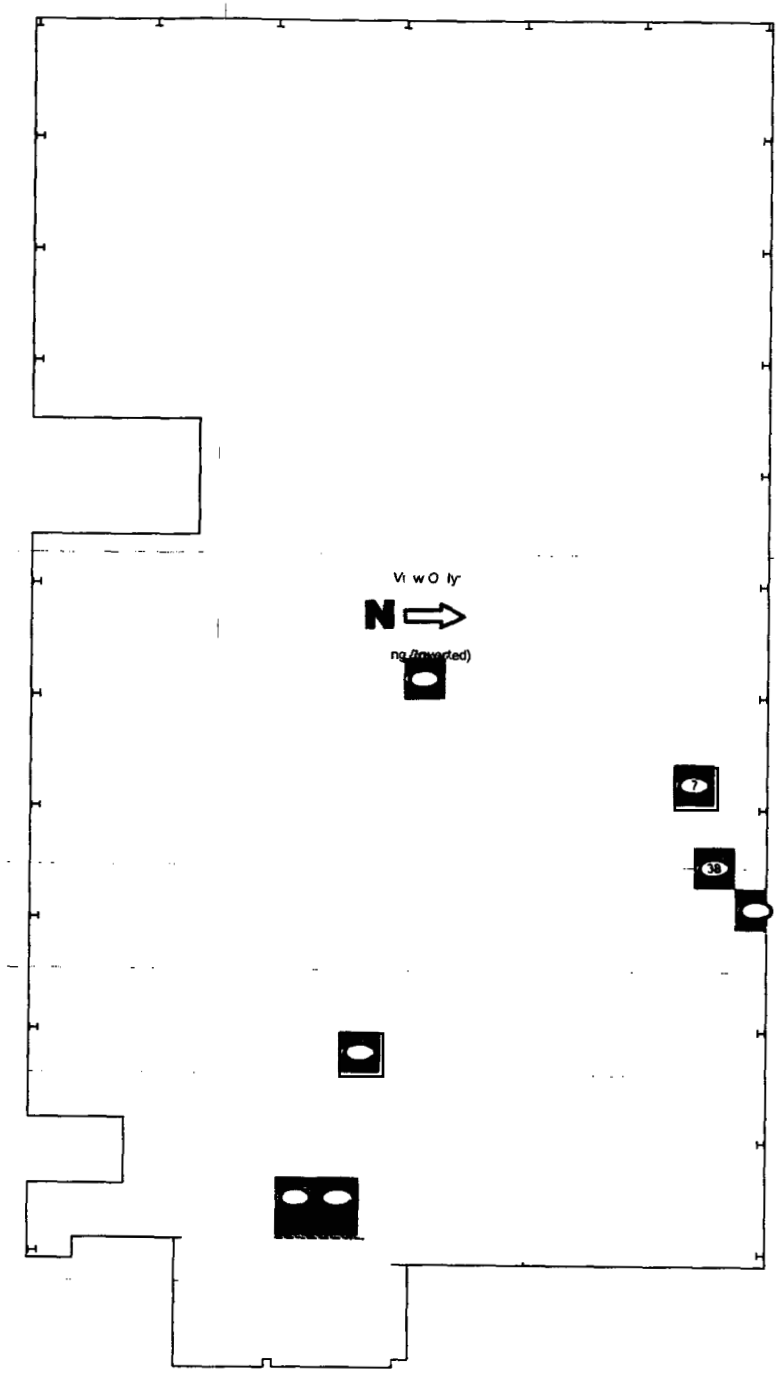
NOTICE

All drawings located at the end of the document.

TYPE 1 RLC SURVEY FOR AREA 5, GROUP 5

Survey Area 5 Survey Unit 130W03 Class ficat n 3
Building 130
Survey Unit Descripti n Warehouse
Total Area 7 588 sq m Total Fl r Area 2 512 sq m





SURVEY MAP LEGEND

- Smca & TSA Loc
- Sm TSA & S pl L
- Open/l s bl Arc
- A A h Survey U

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0 METERS 10

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CH2MHILL

MAP ID 03 0204/B130W SC

Ap 1 2004

TYPE 1 RLC SURVEY FOR AREA 5, GROUP 5

Survey Area 5 — S rvey Unit 130W03 — Clas rf catio 3
Building 130
Survey Un t Descr pti n Warehouse
Total Area 7 588 sq m — Total Floor A ea 2 512 sq m

Stair 1

Stair 2

Stair 3

Room 170 (Foyer)

Room 178

Room 241

SW Alcove (245) & Balcony (248)

Room 185

Room 180

Room 181

Room 242

Room 243

Room 176

Room 174

Room 182

Room 246

Room 175

Room 172

Room 171

Room 183

Room 244

Room 247

SURVEY MAP LEGEND

- Sm & TSA Loc
- Smca TSA & S mpl L
- Op n/l bl A
- A A h Survey U

S a S rv y I f m ti
S r y I t m t ID #( ) & RCT ID #( )
1 7

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0 METERS 8

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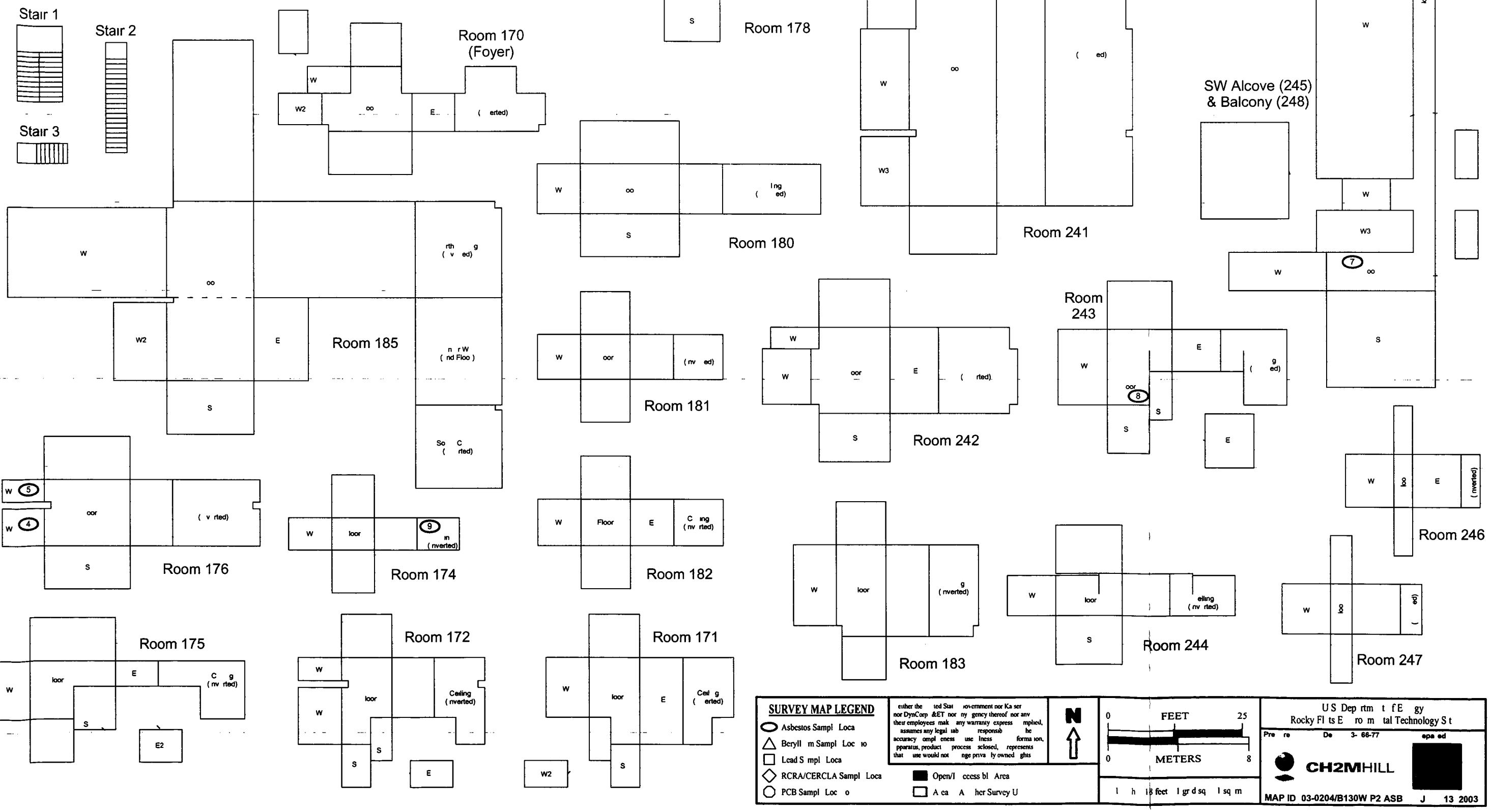
CH2MHILL

MAP ID 03 0204/B130Wpg2 SC — Ap 1 2004

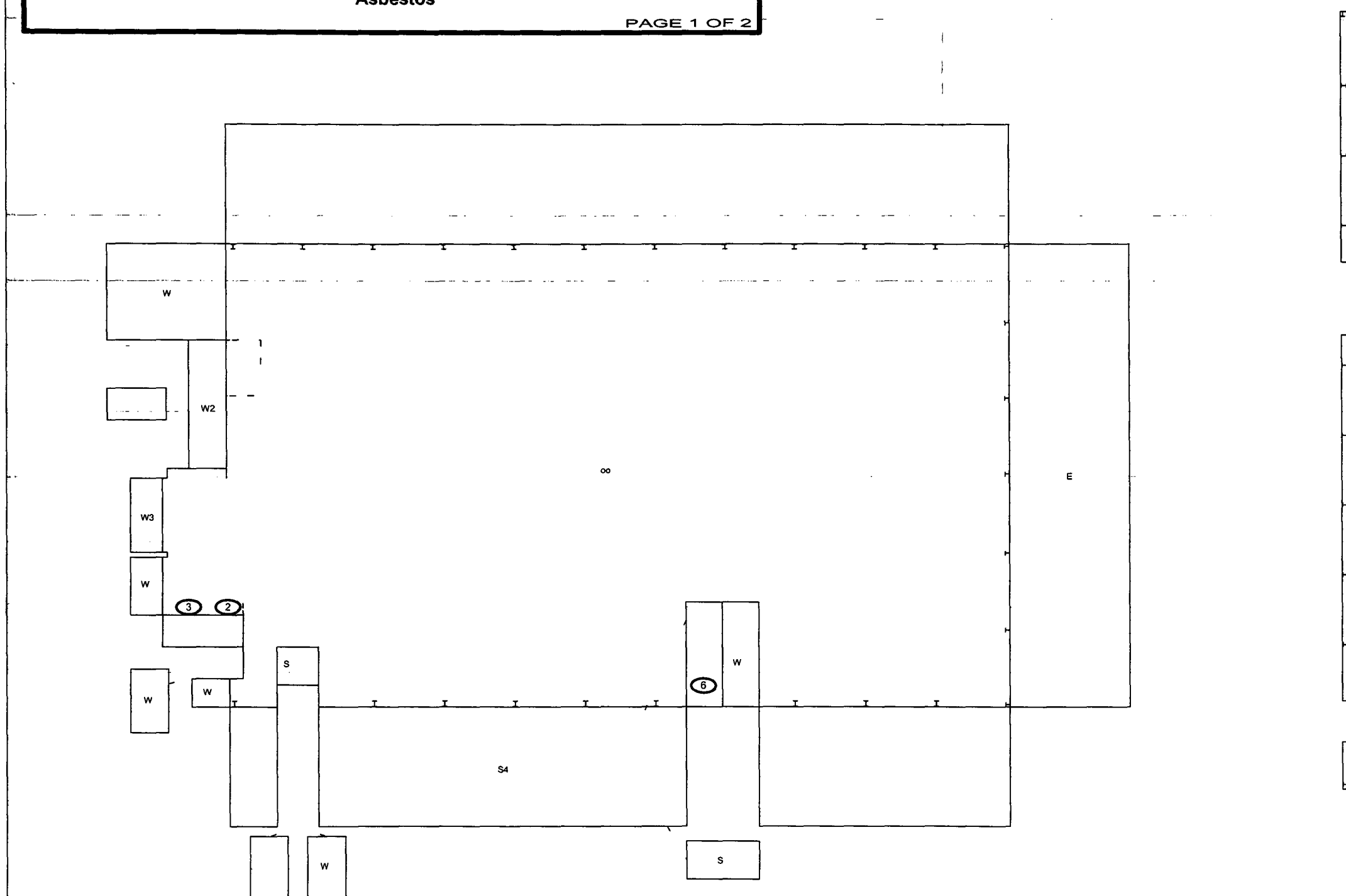
CHEMICAL SAMPLE MAP

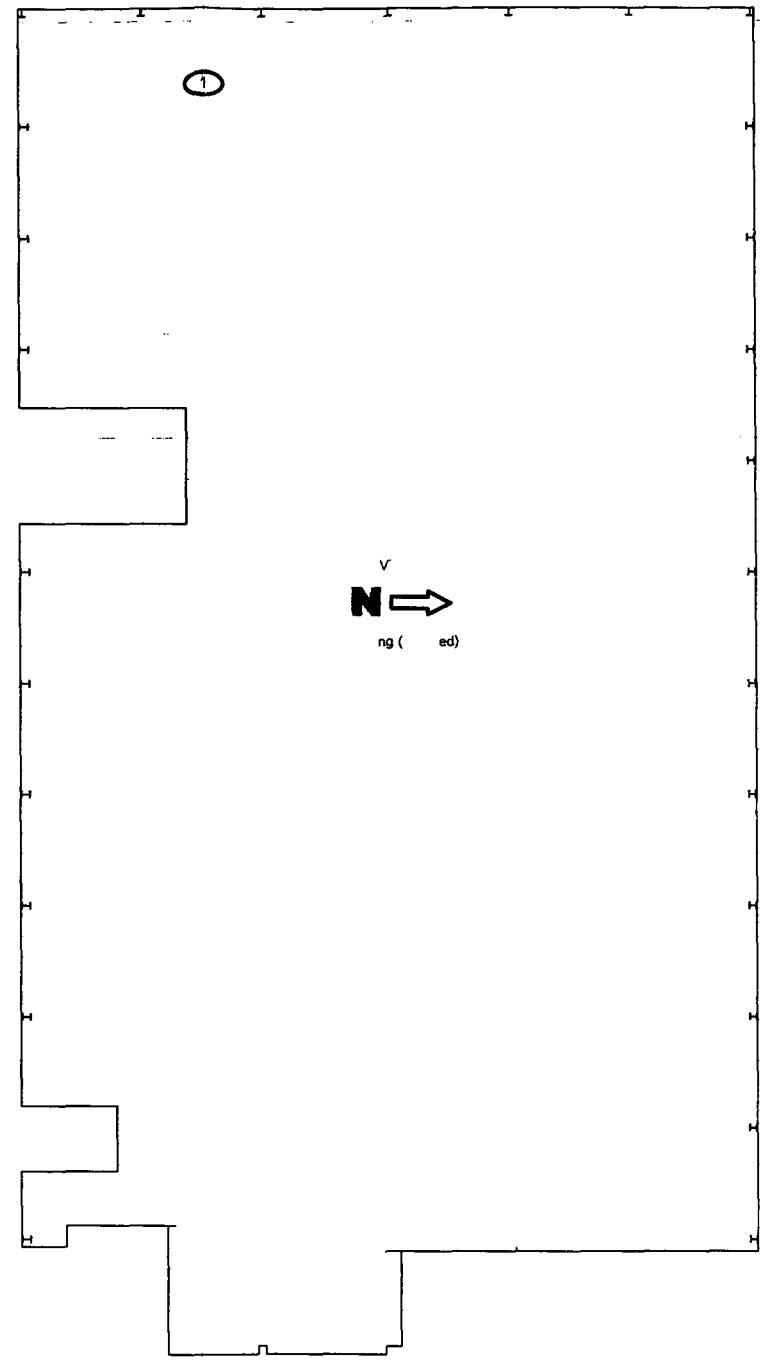
Building 130 Warehouse
Asbestos



CHEMICAL SAMPLE MAP

Building 130 Warehouse
Asbestos





SURVEY MAP LEGEND

- Abcs S mpl Loc
- B ryll m S mpl Loc
- L d S pl Loc
- RCRA/CERCLA S pl L
- PCB S pl Lo

Opcn/I c bl A
A A h S rv y U

FEET 0 40
METERS 0 10

US D p rtm t of E gy
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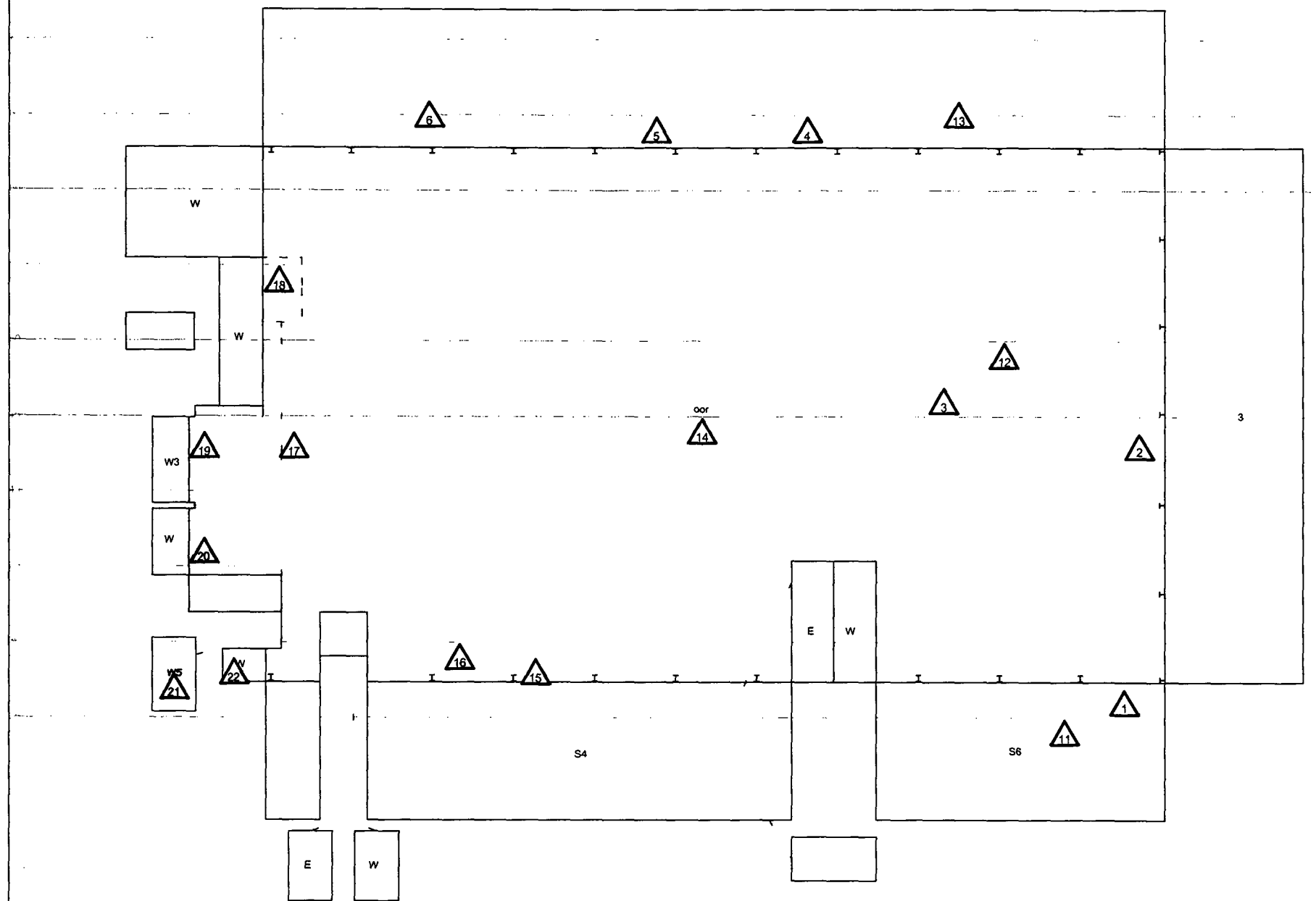
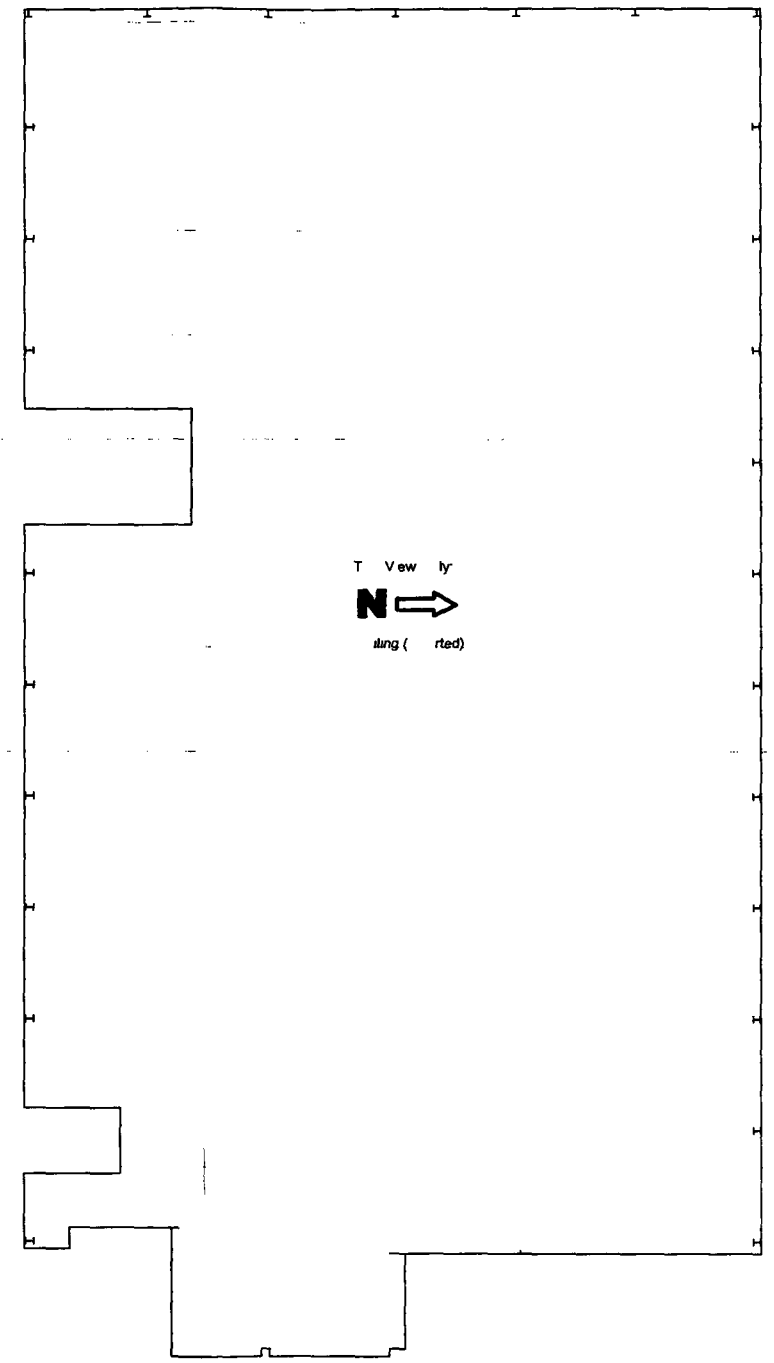
CH2MHILL

MAP ID 03 0204/B130W P1 ASB J 13 2003

CHEMICAL SAMPLE MAP

Building 130 Warehouse
Beryllium





SURVEY MAP LEGEND

- A bcs Sampl Lo
- B ryll m S mpl Loc
- L d S mpl Lo
- RCRA/CERCLA S pl L
- PCB S mpl Loc

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CHEMICAL SAMPLE MAP

Building 130 Warehouse
Beryllium

Stair 1

Stair 2

Stair 3

Room 170 (Foyer)

Room 178

Room 241

SW Alcove (245) & Balcony (248)

Room 185

Room 180

Room 181

Room 242

Room 243

Room 246

Room 176

Room 174

Room 182

Room 175

Room 172

Room 171

Room 183

Room 244

Room 247

SURVEY MAP LEGEND

- Abcs S pl Loc
- B ryll m S mpl Loc
- L d S mpl Loc
- RCRA/CERCLA S pl L
- PCB S mpl Loc

Opcn/l cs bl A

A A h Surv y U

N

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0 METERS 8

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R ky Fl t E ro m t l Te h l gy St

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MAP ID 03-0204/B130W P2 BE J 13 2003